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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/546,962

04/11/2000

Peter Merchant

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07/05/2005

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EXAMINER

LEE, SEUNG H

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/546,962

Applicant(s)

MERCHANT, PETER

Examiner

Seung H. Lee

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-10,12-18,20,21 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-10,12-18,20,21 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 May 2005 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 8-10, 12-18, 20, 21, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brobst et al (US 6,053,409, of record) (hereinafter referred to as 'Brobst') in view of Loya (US 5,559,320).

Re claims 1, 3-6, 8-10, 12, 15, 16, 18, 20, 21, 23; A system for scanning a barcode comprising a light source (122), a piezoelectric material reflector (124) having an arcuate reflective surface with a variable shape generally radial, a shape controlling system (260) for controlling the shape of reflector according to the voltage or power source, a beam expander (129) wherein the reflector reflecting a light beam from the light source onto the beam expander, the beam expander reflecting the light beam onto

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the target, and the shape controlling system varying the shape of the reflector (see Fig. 5-8; col. 5, lines 5- 60), a housing having horizontal top and bottom sides, vertical left and right sides, and an aperture in one of the sides(see Fig. 11; col. 6, line 44 – col. 8, line 3), the alternative beam expander (80 and 100) is shown in figures 3 and 4 having the forms of flat facet (104) and convex facets (102' and 102'') for creating different focal points (see figs. 3 and 4; col. 3, lines 52- col. 4, line 47).

However, Brobst fairly suggest that the bema expander has a cylindrical reflective outer surface.

Loya teaches that a scanning system comprise a scanning mirror (24) in a form of cylindrical shell or body (24b) having a plurality of reflective faces (24a) for reflecting/directing the scanning beam onto the target (22), the cylindrical shell or body also serves as a polished round pillar having a cylindrical reflective pouter surface (see figs. 1-2; col. 3, line 51- col. 4, line 51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the teachings of Loya (i.e., cylindrical body for reflecting the scanning beam) into the system of Brobst in order to provide a constant focal length of the scanning system.

Re claim 2: A photo sensor (132 and 154) generates an electrical representative of reflected light beam from the target (see Fig. 5, 5A; col. 4, lines 48-67).

Re claims 13, and 14: A conversion and interface system receiving the electrical signal from the photo sensor and converting the electrical signal to a digital code (see col. 3, lines 29- 45).

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Re claim 17: The reflector includes a piezoelectric material having a metal electrode layer (262) and a piezoceramic layer (264) which serves as a two electrode wherein the shape of reflector varies according to the voltage across the electrodes (see Fig. 6, 7; col. 5, lines 25-42).

Response to Arguments

4. Applicant's arguments with respect to claims 1-6, 8-10, 12-18, 20, 21, and 23 have been considered but are moot in view of the new ground(s) of rejection.


In response to the applicant's argument that "Brobst et al. show a polygonal scan mirror that consists of alternating concave, flat, elliptical or spherical configuration.....Nowhere does the cited reference show that scan mirror has a facet with a cylindrical configuration." (see page 6, line 26+) and "....the reference fails to disclose or suggest expander means comprising a polished round pillar having a cylindrical reflective outer surface..." (see page 7, line 9+), the Examiner respectfully provide a Loya reference wherein the Loya reference teaches that the scanning mirror is configured to be a cylindrical form as discussed in paragraph 2 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung H. Lee whose telephone number is (571) 272-2401. The examiner can normally be reached on Monday-Friday, 7:30 AM- 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Seung H Lee
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June 24, 2005